AUTOMATIC OPERATING CARS

Most Lionel train outfits contain at least one automatic car which is unloaded or otherwise operated by means of the same remote control track section used for uncoupling. The only exception to this is the Stock Car, which is described later.

CARS USING CONTACT SLIDERS

The mechanism of most *unloading* cars, such as the Milk Car and the Coal and Lumber Dump Cars, is powered by a built-in electrical coil, or *solenoid*, which gets its current from the track through the two sliding contact shoes on the bottom of the car. To operate such cars position them on the remote control section so that both contact shoes rest on the auxiliary control rails (See Figure 16). Then press "*Unload*" button on the controller.

If a dump car is heavily loaded, or if track voltage has been reduced to slow down the train, the car mechanism may operate sluggishly. In such cases increase the track voltage until the car operates satisfactorily.

The proper cargo is supplied with all dump cars. In Coal Dump cars use only Lionel Artificial Coal No. 206. Any other material, such as sand, etc. will tend to clog the operating mechanism of the car.

PLUNGER-OPERATED CARS

Operating cars such as the Animated Box Car and the Searchlight Car do not make an electrical connection to the auxiliary rails. Instead, their mechanism is operated when the iron plunger, or *armature*, projecting from the bottom of the car is attracted by the electro-magnet in the remote control section. To operate these cars position them on the remote control section so that the plunger is directly over the electro-magnet (See Figures 17 and 20); then press the "Uncouple" button of the controller. Cars can be operated either while they are standing or in motion, by pressing the controller button at the right moment. In the Animated Box Car, to get the man back into the car shut the open door by hand. In the Searchlight Car the light will continue burning until the car is moved back to the remote control section and operated again.

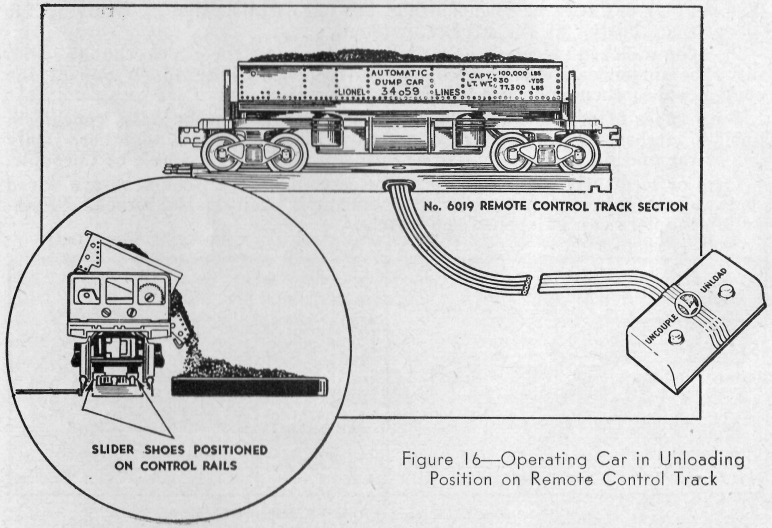

Figure 16—Operating Car in Unloading Position on Remote Control Track

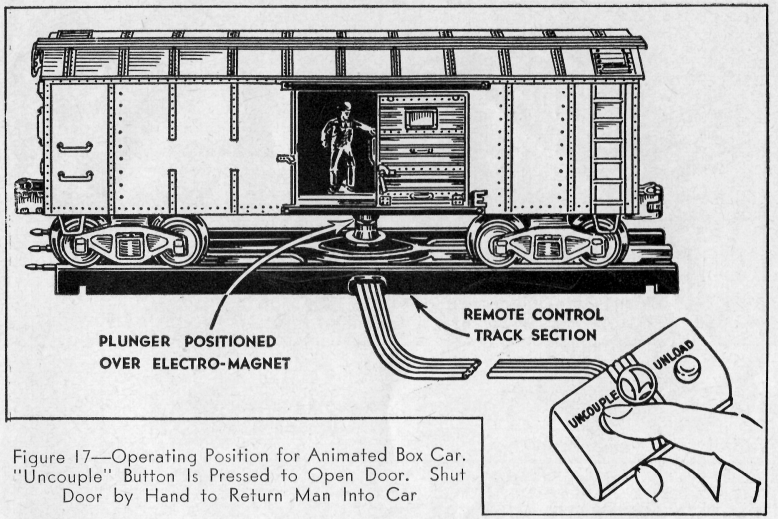

Figure 17—Operating Position for Animated Box Car. "Uncouple" Button Is Pressed to Open Door. Shut Door by Hand to Return Man Into Car

FIXED VOLTAGE FOR REMOTE CONTROL TRACK

The Remote Control Section is usually supplied with track voltage. It is possible, however, to connect it so that it will receive a fixed voltage directly from the transformer. To do that one of the four wires leading from the controller must be disconnected from the remote control section, and connected instead to a fixed voltage post on the transformer. On UCS sections this wire is No. 3; on 6019 section, it is No. 4. The transformer connections for such an installation are the same as for the Fixed Voltage Plug on 022 Switch, specified in Figure 29 on page 17.

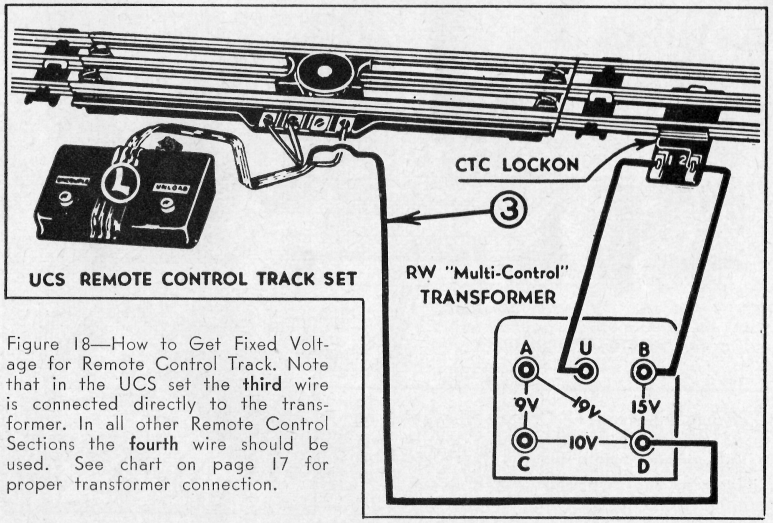

Figure 18—How to Get Fixed Voltage for Remote Control Track. Note that in the UCS set the **third** wire is connected directly to the transformer. In all other Remote Control Sections the **fourth** wire should be used. See chart on page 17 for proper transformer connection.